

In the Claims:

Please amend the claims as follows:

Claims

What is claimed is:

1. (Amended) A process for processing electric components, especially semiconductor chips (2), which the (components) are releasably held as a group of at least two components (2) with a first side on a first carrier material (3) of a first carrier (4), characterized in that wherein the first carrier material (3) is separated from the first carrier (4) in an edge area not occupied by the components (2),

the a section (3') of the first carrier material (3) with the components (2) is placed on a first transporter and

the components (2) are then removed or pulled off of the first carrier material (3') for placing to a placing area (3a, 4a, 44).

2. (Amended) The process according to claim 1, characterized in that wherein the components (2) are then removed multiply from the first carrier material (3') for placing on a placing area (3a, 4a, 44) together.

3. (Amended) The process according to claim 1 or 2, characterized in that wherein the section (3') of the first carrier material (3) with the components (2) is placed with a side facing away from the components on the first transporter (6).

4. (Amended) The process according to one of the foregoing claims, characterized in that claim 1, wherein the first carrier is a carrier frame (4) with the first carrier material (3).

5. (Amended) The process according to one of the foregoing claims, characterized in that the claim 1, wherein a second carrier is a second carrier material (3a) held in a second carrier frame (4a).

6. (Amended) The process Process according to one of the foregoing claims, characterized in that claim 5, wherein the placing of the components (2) on the second carrier (3a, 4) takes place singly.

7. (Amended) The process Process according to one of the foregoing claims, characterized in that claim 5, wherein the placing of the components (2) on the second carrier (3a, 4) takes place multiply, i.e. as a group or sub-group.

8. (Amended) The process Process according to one of the foregoing claims, characterized in that claim 1, wherein the group of at least two components is formed by a semiconductor wafer (1), which is separated into a plurality of semiconductor chips (2) located on the first carrier material (3).

9. (Amended) The process Process according to one of the foregoing claims, characterized in that the claim 1, wherein flipping of the components takes place on a transport belt (7) forming the first transporter (6) on which (belt) the components (2) are moved by means of a flipping unit (16) from a feed position (5) to a separating and a transfer position (23).

10. (Amended) The process Process according to claim 9, characterized in that wherein the transport belt (7) forming the first transporter (6) is made of a self-adhesive transport foil.

11. (Amended) The process Process according to one of the foregoing claims, characterized in that claim 1, wherein the separation of the components (2) at the a separating or transfer position (23) takes place in that the a transport belt (7) forming the first transporter (6) is pulled off of the components (2) held with their second side on the a second carrier (3a, 4a) together with the sections (3') of the first carrier material (3).

12. (Amended) The process Process according to claim 11, characterized in that wherein the removal by deflecting the transport belt $\langle 7 \rangle$ forming the first transporter $\langle 6 \rangle$ takes place at a deflection edge $\langle 25 \rangle$ extending crosswise or perpendicular to a transport direction (A) of the first transporter $\langle 6 \rangle$.

13. (Amended) The process Process according to one of the foregoing claims, characterized in that claim 5, wherein the second carriers $\langle 3a, 4a \rangle$ are provided on a second transporter $\langle 17 \rangle$ at the separating and transfer position $\langle 23 \rangle$, preferably for transfer of each group of components $\langle 2 \rangle$ to a separate second carrier $\langle 3a, 4a \rangle$.

14. (Amended) The process Process according to one of the foregoing claims, characterized in that claim 13, wherein the second carriers with the sections $\langle 3' \rangle$ of the first carrier material $\langle 3 \rangle$ or with the groups of components $\langle 2 \rangle$ located on these sections are consolidated before reaching the separating and transfer station $\langle 23 \rangle$ so that the components $\langle 2 \rangle$ already bear with their second side against one of the second carriers $\langle 3a, 4a \rangle$ when the separating and transfer station $\langle 23 \rangle$ is reached.

15. (Amended) The process Process according to one of the foregoing claims, characterized in that claim 1, wherein with the use of first carriers in the form of a carrier frame $\langle 4 \rangle$ and a carrier foil $\langle 3 \rangle$ held in this carrier frame, the carrier foil is separated from the carrier frame $\langle 4 \rangle$ by a separating device $\langle 15 \rangle$ in an area surrounding the components $\langle 2 \rangle$ and the section $\langle 3' \rangle$ of the carrier foil $\langle 3 \rangle$ with the components $\langle 2 \rangle$ is placed on the first transporter $\langle 6 \rangle$.

16. (Amended) The process Process according to one of the foregoing claims, characterized in that claim 1, wherein the components $\langle 2 \rangle$ are transferred at the a separating or transfer position $\langle 23a \rangle$ as at least one component row (R) to a placing area $\langle 35 \rangle$, from which the components are picked up by means of a pick-up unit $\langle 39 \rangle$.

16. 17. (Amended) ~~The process~~ according to claim 16, characterized in that wherein at least two component rows (R) are transferred in one step at the separating and transfer position (23a) to the placing area (35).

17. 18. (Amended) ~~The process~~ according to claim 16, or 17, characterized in that wherein a plurality of components (2), preferably all components of at least one component row (R) or components (2) of a group of several components are picked up from the placing area (35) simultaneously by the pick-up unit (39).

18. 19. (Amended) ~~The process~~ according to one of the foregoing claims, characterized in that claim 16, wherein at the placing area (35) components (2) of at least two component rows (R) are picked up simultaneously with the pick-up unit (39) and that before placing the components the distance of the rows formed at the pick-up unit is increased.

19. 20. (Amended) ~~The process~~ according to one of the foregoing claims, characterized in that claim 1, wherein the components (2) on the first transporter (6) in the transport direction (F) of this transporter all have the same length.

20. 21. (Amended) ~~The process~~ according to one of the foregoing claims, characterized in that claim 1, wherein the components picked up by the first transporter (6) are transferred by means of at least one transporter (44) and/or one flipping unit (45) to pick-ups (47) of a third transporter (46).

21. 22. (Amended) ~~The process~~ according to one of the foregoing claims, characterized in that claim 1, wherein a carrier foil remainder (3') with the components is cut out of the carrier foil (3) carrying the components (2), whereby the carrier foil remainder (3') has a circular or rectangular or square profile.

22. 23. (Amended) ~~An apparatus~~ Apparatus for processing electric components (2), especially semiconductor chips (2), which (components) are releasably held as a group of at least two components (2) with a first side on a first carrier material (3) of a first carrier (4), characterized

by comprising means (10, 53) for separating one section (3') of the first carrier material (3) carrying a group of components (2) and for placing this section (3') on a transport surface of a first transporter (6) at a feed station (5),

whereby the first transporter (6) or its transport surface can be moved between the feed station (5) and a separation or transfer station (23),

and

by means at the separating or transfer station (23, 23a) for removing or separating the components (2) from the section (3') of the first carrier material (3) carrying the components (2) for placing the components (2) on a placing area (3a, 4a, 44).

23. 24. The apparatus ~~Apparatus~~ according to claim 23, characterized in that the further comprising a separating or transfer station (23) is designed so that the for single placing of the components (2) on the second carrier (3a, 4) takes place singly.

24. 25. The apparatus ~~Apparatus~~ according to claim 23, characterized in that the further comprising a separating or transfer station (23) is designed so that the for the multiple placing of the components (2) on the second carrier (3a, 4) takes place multiply, i.e. as a group or sub-group.

25. 26. The apparatus ~~Apparatus~~ according to one of the foregoing claims, characterized in that claim 23, wherein the first transporter has a transport belt (7).

26. 27. The apparatus ~~Apparatus~~ according to claim 26, characterized in that wherein the transport belt (7) is designed

~~to be self-adhesive on one side forming the a transport surface, preferably by a self adhesive foil.~~

27. 28. The apparatus Apparatus according to one of the foregoing claims, characterized by claim 23, further comprising a second transporter (17) for feeding the a second carrier (3a, 4a) to the separating and transfer station (23).

28. 29. The apparatus Apparatus according to one of the foregoing claims, characterized in that if claim 23, wherein the first transporter (6) is designed in the form of a self-adhesive transport belt (7), and further comprises means for deflecting the transport belt (7) by at least 90° ~~or more~~ are provided at the separating or transfer station (23) for releasing the components (2) from the transport belt (7) or from the remainder (3') of the first carrier material (3).

29. 30. The apparatus Apparatus according to claim 29, characterized in that wherein the means for deflecting the transport belt are formed by a deflecting edge (25).

30. 31. The apparatus Apparatus according to claim 30, characterized in that wherein projections (27) are provided on the deflection edge (25) that extend beyond the latter and function to hold down the components (2).

31. 32. The apparatus Apparatus according to one of the foregoing claims, characterized in that claim 23, further comprising connected to the separating and transfer position (23a) a placing area (35) is provided for at least one component row (R) and that a pick-up element (39) is provided for picking up the components, (2), preferably for picking up the entire component row (R) or for the simultaneous pick-up of a component group comprising a plurality of components (2).

32. 33. The apparatus Apparatus according to claim 32, characterized in that wherein the pick-up unit is formed by at

least two holders ~~(40)~~ and that the holders ~~(40)~~ ~~can be~~ ~~are~~ moved relative to each other in order to increase ~~the~~ a distance (x, x).

33. 34. ~~The apparatus Apparatus~~ according to claim 33, characterized in that wherein each holder ~~(40)~~ forms fixtures or bearing surfaces ~~(41)~~ for several components ~~(2)~~.

34. 35. ~~The apparatus Apparatus~~ according to claim 33, ~~or 34,~~ characterized in that wherein the holders are vacuum holders ~~(40)~~.

35. 36. ~~The apparatus Apparatus~~ according to ~~one of the foregoing claims,~~ characterized in that claim 23, wherein the means for separating an element ~~(3')~~ from the first carrier material carrying a group of components ~~(2)~~ and for placing ~~this~~ the element ~~(3')~~ onto the transport surface of the first transporter ~~(6)~~ are formed by a suction head ~~(10', 53')~~ with a cutting or separating unit ~~(15, 56, 59)~~.

36. 37. ~~The apparatus Apparatus~~ according to claim 36, characterized in that wherein the cutting or separating unit is an endless driven belt ~~(56)~~ with at least one cutting edge.

37. 38. ~~The apparatus Apparatus~~ according to claim 36 ~~or 37,~~ characterized in that wherein the belt ~~(56)~~ is guided over several rollers ~~(57)~~ on the suction head ~~(53')~~ to form an essentially rectangular or square loop.